

B2 Fig. 2A shows a stack of epitaxial layers realized on a semi-insulating substrate 1 made of GaAs for the realization of a PHEMT, by way of non-limitative example. This stack comprises, starting from the substrate: a buffer layer 2 of undoped GaAs with a thickness of the order of 0.5 to 1  $\mu\text{m}$ ; two mutually adjoining layers which form a heterostructure, i.e. having different forbidden bandwidths or gaps, with the layer 3 of InGaAs which is not doped, has the smaller forbidden bandwidth, and has a thickness of the order of 10 to 15 nm, and with the layer 4a, 4b of AlGaAs which is  $n^+$  doped and has a thickness of approximately 20 to 50 nm; and then a covering layer 5 of  $n^+$  doped GaAs with a thickness of approximately 20 to 50 nm. The layer 4a, 4b forms an etch stop layer with respect to the layer 5.

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IN THE CLAIMS

Please cancel Claim 8 without prejudice and amend Claims 1, 2, and 4 as follows in clean form and as shown in Appendix A in marked-up form:

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- B3 1. (Amended) A semiconductor device comprising integrated circuit elements realized in a stack of layers on a substrate